1. (Amended) A method for promoting survival of substantia nigra neuronal cells comprising contacting the cells with an amount of a *hedgehog* agonist sufficient to promote the survival of substantia nigra neuronal cells.

2. (Amended) A method for promoting survival of dopaminergic cells comprising contacting the cells with an amount of a *hedgehog* agonist sufficient to promote the survival of dopaminergic cells.

3. (Amended) A method for promoting survival of GABA-nergic cells comprising contacting the cells with an amount of a *hedgehog* agonist sufficient to promote the survival of GABA-nergic cells.

4. (Amended) A method for treating a disorder characterized by loss of dopaminergic and/or GABA-nergic neurons which comprises administering to a patient a therapeutically effective amount of a *hedgehog* agonist sufficient to decrease the rate of neuron loss.

5. (Amended) A method for the treatment or prophylaxis of Parkinson's disease comprising administering to a patient in need thereof a therapeutically effective amount of a *hedgehog* agonist.

6. (Amended) A method for the treatment or prophylaxis of Huntington's disease comprising administering to a patient in need therof a therapeutically effective amount of a *hedgehog* agonist.

7. (Amended) The method of any of claims 1-6, wherein the *hedgehog* agonist binds to *patched* and promotes *hedgehog* signal transduction.

8. (Amended) The method of claim 7, wherein the *hedgehog* agonist is a small organic molecule.

9. (Amended) The method of claim 7, wherein the binding of the *hedgehog* agonist to *patched* results in upregulation of *patched* and/or *gli* expression.

10. (Amended) The method of any of claims 1-6, wherein the *hedgehog* agonist is a small organic molecule which interacts with neuronal cells to promote *hedgehog* signal transduction.

11. (Amended) The method of any of claims 1-6, wherein the *hedgehog* agonist promotes *hedgehog* signal transduction by altering the localization, protein-protein binding and/or enzymatic activity of an intracellular protein involved in a *hedgehog* signaling pathway.

a1 Cont

12. (Amended) The method of any of claims 1-6, wherein the *hedgehog* agonist alters the level of expression of a *hedgehog* protein, a *patched* protein or a protein involved in the intracellular signal transduction pathway of *hedgehog*.

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16. (Amended) The method of claim 12, wherein the *hedgehog* agonist is a small organic molecule which binds to *patched* and regulates *patched*-dependent gene expression.

22. (Reiterated) The method of any of claims 4-6, wherein a patient is being treated prophylactically.

Please add the following new claims

49. (New) The method of claim 11, wherein the *hedgehog* agonist is an inhibitor of Protein Kinase A.

a3

50. (New) The method of claim 11, wherein the *hedgehog* agonist is an inhibitor of Protein Kinase A signal transduction.

51. (New) The method of claim 50, wherein the inhibitor of Protein Kinase A signal transduction is cAMP or analogs thereof.

The amended claims are re-stated below to reflect changes with respect to the last filing.

1. (Amended) A method for promoting survival of substantia nigra neuronal cells comprising contacting the cells with [a trophic] an amount of [an *ptc* therapeutic]a *hedgehog* agonist sufficient to promote the survival of substantia nigra neuronal cells.

2. (Amended) A method for promoting survival of dopaminergic cells comprising contacting the cells with [a trophic] an amount of [an *ptc* therapeutic]a *hedgehog* agonist sufficient to promote the survival of dopaminergic cells.

3. (Amended) A method for promoting survival of GABA-nergic cells comprising contacting the cells with [a trophic] an amount of [an *ptc* therapeutic]a *hedgehog* agonist sufficient to promote the survival of GABA-nergic cells.

4. (Amended) A method for treating a disorder characterized by loss of dopaminergic and/or GABA-nergic neurons which comprises administering to a patient a therapeutically effective amount of [an *ptc* therapeutic]a *hedgehog* agonist sufficient to decrease the rate of neuron loss.

5. (Amended) A method for the treatment or prophylaxis of [treating or preventing] Parkinson's disease comprising administering to a patient in need thereof a therapeutically effective amount of a *hedgehog* agonist [an *ptc*therapeutic].

6. (Amended) A method for the treatment or prophylaxis of [treating or preventing] Huntington's disease comprising administering to a patient in need therof a therapeutically effective amount of a *hedgehog* agonist [an *ptc*therapeutic].

7. (Amended) The method of any of claims 1-6, wherein the *hedgehog* agonist[*ptc* therapeutic] binds to *patched* and [mimics]promotes *hedgehog*[-mediated *patched*] signal transduction.